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November 13, 2007

MEMORANDUM TO THE ANTITRUST DIVISION, U.S. DEPARTMENT OF JUSTICE

Re: *2007 Telecommunications Symposium - Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers*

The following comments are submitted on behalf of Frontline Wireless, LLC ("Frontline") in connection with the above-referenced proceeding. Frontline appreciates the opportunity to submit these comments. Please contact the undersigned if you have any questions regarding this submission.

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The U.S. commercial wireless industry effectively began with the issuance by the Federal Communications Commission ("FCC") in the 1980s and early 1990s of two cellular licenses in each of 734 cellular marketing areas ("CMAs") across the country. In part due to that regulatory limitation on the number of competitors, early offerings were expensive and not widely used, particularly outside of a subscriber's local area. Beginning in 1995, the FCC made available additional spectrum licenses covering geographies of various sizes that led to increasing competition for wireless services in many geographic areas. A dramatic increase in wireless usage and number of subscribers was the direct result of increasing the number of firms that held the spectrum necessary to compete. However, that trend towards increasing competition has slowed in the last five years and threatens to reverse itself. This evaluation of the wireless industry has created circumstances that, absent the introduction of additional spectrum to allow for new entry, will return it to the stagnant early days of the cellular duopoly. Moreover, the acquisition of additional nationwide CMRS spectrum by incumbents in the upcoming auction will in many circumstances violate the antitrust laws just as clearly as mergers of companies with CMRS spectrum holdings.

Customers now expect national coverage at no extra cost. Only the two largest providers – AT&T and Verizon Wireless – have the spectrum holdings necessary to provide nationwide coverage in an economical manner. As would be expected, they have separated themselves from the other purported national carriers. The remaining local and regional carriers, as well as T-Mobile and Sprint, are falling further behind the industry giants every month as their plans to

introduce cutting-edge services using higher frequency spectrum founder on the crushing economics of nationwide buildout. Further, the increasing prevalence of bundled service plans that offer voice, data, and video from a single provider further increase the competitive pressure on those wireless providers not affiliated with a wireline business.

Fortunately, the availability of additional nationwide spectrum in the 700 MHz band (through the nationwide D Block license or a package of C Block licenses) offers an opportunity to divert the wireless industry from the path to duopoly and the accompanying decreased innovation and higher prices, the hallmarks of a classic cartel. However, unless antitrust enforcers act vigorously to ensure that the potential competition represented by the nationwide blocks of highly-desirable 700 MHz spectrum is not foreclosed by the dominant incumbents, the wireless market will continue on its current trajectory. That will result in a catastrophic loss of potential innovation and lower prices for consumers of wireless services. It will also impede the development of cross-platform competition between wireless and the existing forms of wireline voice, video and data transmission.

This submission first explains the importance of under 1 GHz spectrum and why the oft-repeated claims that spectrum is increasingly abundant are not matched by market realities. It is true that much more spectrum is available for commercial use today than in 1995 or even 2005. The increasing reliance of consumers on nationwide wireless services, however, has, somewhat paradoxically, increased the competitive advantage of those initial cellular licenses issued in the 1980s. As a result, under 1 GHz spectrum is now an "essential facility" for a credible nationwide wireless provider. We then discuss how an on-going pattern of acquisitions has assembled that prime cellular spectrum into two nationwide behemoths that are increasingly becoming a market until themselves, while the smaller players struggle. As would be expected, that increased concentration in the market for cutting-edge wireless services has given rise to anticompetitive effects in the form of decreased innovation and higher prices. Finally, we outline the basic antitrust principles regarding potential competition (and the loss thereof as a result of acquisitions by dominant firms) that, if faithfully applied, would ensure that the historic opportunity is not wasted to divert the wireless industry from returning to its original duopoly structure.

I. All Spectrum Is Not Created Equal

The competitive problems emerging in the wireless industry result in large part from the lack of desirable spectrum for nationwide service. The 700 MHz spectrum is commonly referred to as "beachfront property" because of its favorable propagation characteristics, which are shared by the cellular spectrum in the 800

MHz band licensed in the 1980s.[1] It is important, however, to understand exactly how these "beachfront" characteristics give rise to a distinct relevant market for under 1GHz spectrum. Communications carried on lower frequency spectrum travel farther, penetrate buildings and obstructions more easily, and are more resilient than communications carried on higher frequency spectrum. As a result, carriers operating on lower frequency spectrum require only a fraction of the capital infrastructure that carriers on higher frequency spectrum require.[2]

One of the most daunting barriers to entry in the wireless market is the upfront, fixed costs of building a network. Accordingly, one of the most effective ways to reduce this set of significant capital expenses — and thus facilitate entry — is to use spectrum that requires fewer facilities. It is no accident that the two largest wireless carriers today were handed (*for free*) substantial portions of their low frequency 800 MHz spectrum in the early days of cellular.[3]

The Antitrust Division and FCC have acknowledged the superior propagation characteristics and economic advantages of lower frequency spectrum on multiple occasions, most recently in the Antitrust Division enforcement action seeking divestitures in connection with AT&T's acquisition of Dobson Communications. The Antitrust Division's complaint against AT&T and Dobson alleged that

> [a]s a result of holding the cellular spectrum licenses and being early entrants into these markets, the networks wholly or partly owned by AT&T, Dobson, or the Cellular One licensee provide greater depth and breadth of coverage than their competitors, which are operating on

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[1] *See*, *e.g.*, *Telephony*, "Public Safety Eyes 700 MHz Spectrum," April 9, 2007 ("Often likened to 'beachfront property,' the 700 MHz band not only can support 4G mobile broadband services, it also has excellent propagation characteristics and could enable broad geographic coverage[.]").

[2] Spectrum and base stations in a given geography are a tradeoff: capacity can be increased either by adding additional base stations (i.e., splitting cells) or acquiring additional spectrum. However, for the initial coverage required to be a nationwide carrier, having spectrum is the only way to compete. Generally a firm needs a minimum of 20 megahertz below 1 GHz in order to compete at all; and it needs that spectrum nationally.

[3] *See* Report and Order, *Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, 12 FCC Rcd 15668, ¶ 6 (1996) ("[I]n 1981, . . . the Commission amended Part 22 of the rules to provide for the authorization of two cellular licensees in each market — one wireline carrier and one non-wireline carrier.") ("*Competitive Service Safeguards Order*").

PCS spectrum in these relevant geographic markets, and thus are more attractive to consumers.[4]

Following the move to nationwide calling plans, no one can compete effectively with AT&T or Verizon without spectrum below 1 GHz or access to such spectrum through roaming agreements. Unfortunately for consumers, neither is readily available at the moment.

II. Nationwide Blocks of Low Frequency Spectrum Are Scarce and Concentrated in the Hands of Two Dominant Providers

The under 1 GHz spectrum currently in use is held predominately by AT&T and Verizon. These incumbents enjoy significant competitive advantages that stem from decades-old grants of low frequency spectrum and numerous acquisitions of firms that held cellular licenses.[5] Verizon and AT&T see significantly higher revenue-per-minute and lower customer churn than their PCS-only competitors.[6] These two companies now account for approximately two-thirds of all net customer additions in the industry and over 75 percent of net additions among national carriers.[7] If these incumbents successfully corner the 700 MHz spectrum as well, there will be no realistic opportunity for meaningful competition.

Market concentration threatens the wireless sector because of its unique characteristics. Because market entry is prohibitively expensive, market concentration can easily solidify into permanent oligopolies and duopolies — with resulting cartel-like behavior and price increases. These entry barriers are exacerbated by the fact that today's wireless markets are dominated by legacy incumbents (Verizon and AT&T) and their affiliates who have strong incentives to prevent the emergence of new wireless competitors (particularly wireless broadband competitors). As a result, they have every incentive to defend these already formidable barriers against every possible breach. With respect to the new

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[4] Complaint in United States v. AT&T Inc. and Dobson Communications Corp., U.S. District Court for the District of Columbia, Case No. 1:07-CV-01952 ("AT&T/Dobson Complaint") at ¶ 28.

[5] Just in the past six months, AT&T (Dobson Communications) and Verizon (Rural Cellular/Unicell) have each agreed to acquire one of the relatively few remaining independent cellular operators.

[6] *See*, *e.g.*, Merrill Lynch "US Telecom Services: US Wireless Matrix 4Q06," at 1, 31 (March 30, 2007) (research report) ("*Merrill Lynch Research Report*"); *see also* RCR Wireless News, "Study: Coverage Still King," Jan. 22, 2007 ("Wireless subscribers still covet broad network coverage and will switch carriers to get it, according to a new survey of mobile users by comScore Networks. About 27 percent of survey respondents who had switched to a new carrier cited ``better coverage'' as their primary reason for switching[.]").

[7] *Merrill Lynch Research Report*, at 3.

spectrum being made available by the upcoming FCC auction, the current market concentration makes it *economically rational* for incumbents to purchase and warehouse spectrum. Indeed, the advantage of denying spectrum to a new entrant is so valuable that an incumbent will likely pay a "blocking premium" to obtain it.

Despite all of the predictions and media announcements regarding the future use of AWS, BRS/EBS, and other blocks of spectrum relying on nascent technologies, the under 1 GHz offerings of Verizon and AT&T are increasingly dominating the wireless marketplace. The other national carriers (T-Mobile and Sprint) are losing subscribers and struggling with the economics of constructing nationwide networks to utilize the higher frequency spectrum they acquired relatively recently. The Antitrust Division complaint against the AT&T-Dobson merger acknowledges the difficulty of relying on less desirable spectrum to compete with existing incumbents:

> Although a number of other firms own 1900 MHz PCS spectrum in the relevant geographic markets, the propagation characteristics of 1900 MHz PCS spectrum are such that signals using those frequencies extend to a significantly smaller area than 800 MHz cellular signals. The relatively higher cost of building out 1900 MHz spectrum, combined with the relatively low population density of the areas in question, suggest that competitors with 1900 MHz spectrum are unlikely to build out their networks to reach the entire area served by AT&T and Dobson. Although additional spectrum has been and will be made available through FCC auctions, it is unlikely that additional mobile wireless telecommunications services based on this spectrum will be deployed in the near future in the relevant geographic areas.[8]

Even where significant local networks can be built using higher frequency spectrum, that local competition is left at a significant disadvantage when competing with national firms. Only national competition is relevant to most customers because customers expect wireless service to be available to them nationally even when they buy it at a local store and even when they primarily use it locally.

As previously noted, access to roaming arrangements on reasonable terms could offer another possibility for a national competitor to emerge to compete with Verizon and AT&T. Roaming has become an urgent problem for mid-sized and

[8] AT&T/Dobson Complaint at ¶ 31.

rural carriers and their customers.[9] As wireless service has gone "national," wireless customers demand nationwide capabilities from their carriers. Roaming — and the nationwide capabilities it enables — is therefore essential to the continuing financial viability of mid-sized and rural carriers. These smaller carriers, however, are increasingly forced to rely on a dwindling number of national carriers for roaming agreements — national carriers who no longer have a reciprocal need for roaming arrangements with regional or local carriers.[10] And when one layers on the fact that the largest national carriers — AT&T and Verizon — use different technologies, the national roaming options for a particular rural carrier often boil down to one, and that one carrier consistently has resisted voice roaming agreements and has recently refused data roaming agreements.[11] Without prompt access to more competitive roaming options, rural and mid-sized carriers face a bleak future and will likely continue to be forced to sell out to the national 850 MHz carriers, further concentrating an already-concentrated market.[12]

The providers operating nationwide wireless networks have gained an additional competitive advantage through the recent trend towards bundling of telecommunications services. The ability of a single firm to offer voice, data, and video as part of a single package makes it impossible for firms without such a broad offering to compete for many customers and may give rise to the opportunity for cross-subsidization across product lines that would further disadvantage new entrants in the wireless sector. The possibility of a third nationwide wireless network would create an important competitive option for those customers that do

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[9] *See*, *e.g.*, Comments of Leap Wireless International, Inc., *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket No. 05-265 (Nov. 28, 2005) ("[L]ack of roaming partner choices is a major structural problem within the CMRS industry, and correspondingly, a major problem for smaller and regional wireless carriers and their customers.").

[10] *See RCR News*, "AT&T Mobility ends eastern Texas roaming agreement," (May 22, 2007) ("AT&T Mobility ended a roaming agreement with regional wireless operator Cellular One of East Texas. . . . '[T]he need for roaming partners is sometimes diminished because of the increasing ubiquity of our network,' said AT&T spokesman Mark Siegel, who confirmed that the company no longer has a roaming agreement with Cellular One of East Texas").

[11] *See* Report and Order and Further Notice of Proposed Rulemaking, *In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, 22 F.C.C. Rcd. 15,817 (2007); *Large Carriers Oppose Request to File Roaming Agreements*, TELECOMM. REP., May 15, 2006.

[12] As the Division alleged in its complaint against the AT&T-Dobson merger, "[a] mobile wireless telecommunications services provider with limited coverage in a geographic area typically does not aggressively market its services in that area because it can service customers only through a roaming arrangement with a more built-out competitor under which it must pay roaming charges to, and rely on, its competitor to maintain the quality of the network." AT&T/Dobson Complaint at ¶ 28. The likelihood of local or regional competitors becoming effective national competitors decreases with each acquisition by AT&T or Verizon.

not want a bundled service, or for regional or competitive wireline providers looking for a viable wireless partner to bundle with their own offerings. If the nationwide 700 MHz licenses are acquired by an incumbent provider, the possibility for such cross-platform competition will be foreclosed.

III. Elimination of Potential Competition Through Acquisition of Critical Inputs Violates the Antitrust Laws

The antitrust laws prohibit both transactions that eliminate existing competition between direct competitors and those that affect potential competition. As the leading antitrust treatise states, "[t]he acquisition by an already dominant firm of a new or nascent rival can be just as anticompetitive as a merger to monopoly." IV PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 912a (2d ed. 2006). In that circumstance, an acquisition that "eliminates an important route by which competition could have increased in the immediate future . . . bears a very strong presumption of illegality that should rarely be defeated." *Id*.

The antitrust agencies have regularly challenged acquisitions of assets analogous to spectrum licenses that, absent the transaction, would offer the potential for future competition. For example, the Federal Trade Commission has obtained divestitures in numerous pharmaceutical mergers of drugs in early stages of the development process, where the merged firm would have an incentive to warehouse productive research in favor of an existing product.[13]

The acquisition of a potential competitor will violate the antitrust laws where four criteria exist,[14] each of which is present in the wireless industry:

1. The relevant market must be concentrated.

The most recent FTC review of competitive conditions in the wireless sector confirms that it is highly concentrated for purposes of antitrust analysis. The average HHI figure calculated by the FTC is over 2700, which is in the "highly concentrated" range as defined by the DOJ/FTC Horizontal Merger Guidelines. The emerging market for nationwide wireless service, which requires access to under 1 GHz spectrum to compete effectively, is even more concentrated. Aside from Verizon and AT&T, only Sprint and Alltel have significant holdings. Alltel's cellular licenses give it far from nationwide coverage, and it must depend on roaming to compete. Sprint, through the 900 MHz licenses acquired by Nextel, has

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[13] *See*, *e.g.*, Cephalon Inc., 138 F.T.C. 583, 635-36 (2004) (addressing loss of potential competition for prescription drug treatments of cancer pain); Pfizer Inc., 135 F.T.C. 608, 779-80 (2003) (remedying loss of potential competition for extended relief OAB products).

[14] *See* AREEDA, ANTITRUST LAW ¶¶ 1125, 1127.

widespread coverage, but its spectrum holdings are narrow and suffer from technological limitations because they operate on a separate technology from all other wireless providers.

2. The acquired firm or assets probably would have entered the market within a reasonable period of time.

The buildout requirements imposed by the terms of the FCC licensing rules for the C and D Blocks ensure that new entry will be certain and timely. A new entrant acquiring either of those assets would be both legally and practically required to take concrete steps to put an operational nationwide network in place. The two nationwide blocks of 700 MHz spectrum will be used in some fashion; the only question is whether they will effectively be warehoused as part of the existing under 1 GHz spectrum holdings of an existing nationwide competitor or form a new nationwide network that could offer competitive alternatives in geographies with sparse existing wireless coverage.

3. Entry by the acquired firm or assets would create significant procompetitive effects.

The benefits to competition in the wireless sector from new entry are clear. AT&T and Verizon Wireless have spent years building up their current dominant positions through various acquisitions and are prepared to reap the fruits of their strategy. Further cause for concern is the fact that AT&T and Verizon Wireless have an incentive to protect not only their entrenched wireless businesses but also their entrenched *wireline* businesses against new devices, new technologies and new services that the 700 MHz spectrum would support in the hands of less encumbered licensees. This same concern prompted the Commission (with the strong endorsement of the Antitrust Division[15]) to allocate spectrum to non-wireline entities in the early days of cellular and to allocate spectrum for new PCS entrants that could and did compete with the first-generation cellular operators, with dramatic pro-competitive benefits.[16]

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[15] *See* 42 F.C.C.2d 957 (1973) (placing on the record a letter from the Antitrust Division urging the FCC to adopt a spectrum allocation plan that "would provide incentives designed to promote competitive entry into the land mobile field.").

[16] Notice of Proposed Rulemaking, Order on Remand, and Waiver Order, *Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services*, F.C.C.R. 16,639, ¶ (1996) ("[I]n 1981, . . . the Commission amended Part 22 of the rules to provide for the authorization of two cellular licensees in each market — one wireline carrier and one non-wireline carrier."); *See* First Report, *Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, 10 FCC Rcd 8844, at ¶4 (1995) ("*First CMRS Competition Report*") ("The duopoly nature of cellular service (continued…)

4. Few other potential entrants exist.

There is no way to acquire national low frequency spectrum except by buying the D Block or the nationwide package of 8 C Block regions — because roaming does not enable competition and because there is no way to acquire enough spectrum below 1 GHz to build a national license through private market transactions. The notable exception is the spectrum held by Aloha Partners L.P., which AT&T is currently seeking to acquire.[17] The acquisition of either the C or D Block assets by one of the dominant incumbents would have the direct effect or removing one of the last two challengers to the current market position for the foreseeable future.

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The pending FCC auction of 700 MHz spectrum is a critical event in the future development of wireless services. The industry is suffering from an increase in concentration that is threatening future innovation. Fortunately, new assets are becoming available that will allow new entrants to restore competition to the industry. That new entry can only occur, however, if basic antitrust principles are applied to the upcoming auction. There are both strong factual and legal grounds to block the acquisition of either of the two nationwide blocks of 700 MHz spectrum available in Auction No. 73 by either AT&T or Verizon. The market for nationwide wireless services will soon be left with only two effective competitors. For either of those competitors to acquire one of the two basic assets that would allow for new entry would be anticompetitive and illegal as an act of monopolization or attempted monopolization prohibited by Sherman Act § 2.

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made it less than fully competitive, however. Therefore, in the early 1990s, the Commission allocated 143 MegaHertz ('MHz') of spectrum, almost three times the spectrum allocation for cellular service, to create Personal Communications Services").

[17] Standing alone, AT&T's acquisition of Aloha would remove a significant block of desirable spectrum that could be used for new entry and/or innovative services. That is not competitively optimal, but pales in comparison with the competitive harm that would occur if AT&T were to acquire the Aloha 12 MHz licenses (the lower 700 MHz C Block) AND either the upper 700 MHz C Block (22 MHz) or D Block (10 MHz).